

## OPTOELECTRONIC SENSOR

Abstract of the Disclosure

A device for detecting the presence of an antigen including (1) a cell having antibodies which are expressed  
5 on the surface of the cell and are specific for the antigen to be detected, where binding of the antigen to the antibodies results in an increase in calcium concentration in the cytosol of the cell, the cell further having a  
10 emitter molecule which, in response to the increased calcium concentration in the cytosol, emits a photon; (2) a liquid medium for receiving the antigen and in which the cell is immersed; and (3) an optical detector arranged for receiving the photon emitted from the cell.

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